



# 8th NOAA TBPG Workshop

## Kansas City, MO

### April 25-26, 2017

Roundup Presentation

**Arctic Testbed and Proving Ground**

Gene Petrescu / Nathan Eckstein / Tom Heinrichs



# FY16 Highlights

## Arctic Testbed and Proving Ground

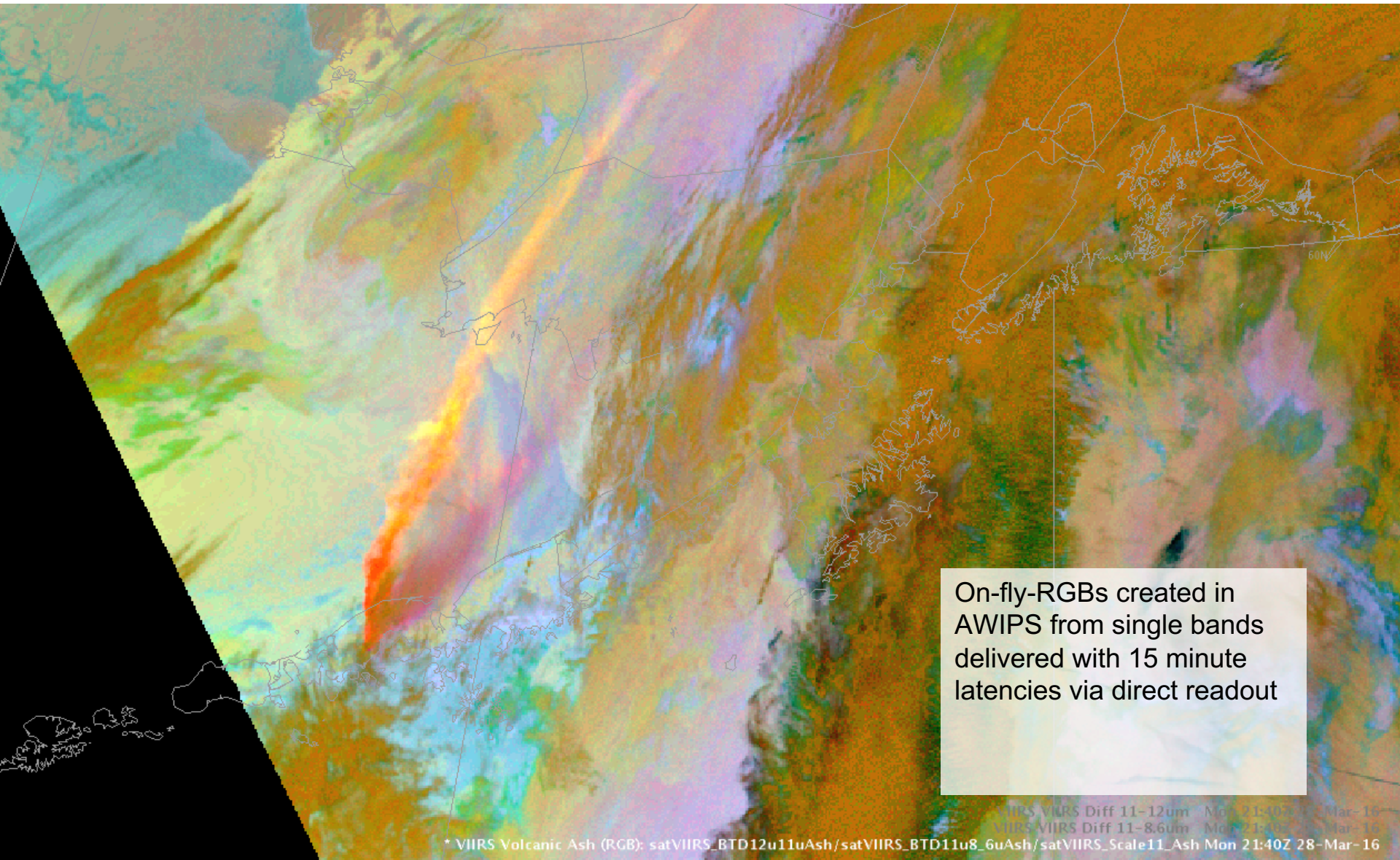
- **FPOP Phase 1 Evaluation and Transition**

- Forecast Process Improvement Plan – Complete revamp of the gridded forecast process at Alaska WFOs. Facilitated making AR NDFD grids operational

- **LEO Imagery RGB Evaluation**

- UAF-GINA / CIMSS / JPSS – Volcanic Ash, Various client side RGBs
- SPoRT / JPSS – Snowfall Rate, Nighttime Microphysics RGB, Daytime Microphysics RGB, NUCAPS, IASI

# Pavlof Volcano, Alaska Peninsula





# FY16 Highlights

## Arctic Testbed and Proving Ground

- **Research Evaluation of ESRL RASM Ice Model**

- Janet Intieri / Amy Solomon – Sat with Alaska Sea Ice Program staff and performed real time evaluation of the RASM model during freeze-up in the Beaufort Sea

- **River Watch 2016**

- Collaborative effort with UAF / NOAA UAS Program investigating the utility of UAS surveillance to monitor River Ice Breakup
- Continued evaluation of River Ice Changes via LEO satellite imagery. JPSS / SPoRT



# FY16 Transition Metrics

## Arctic Testbed and Proving Ground

Major Tests Conducted	Transitioned to Operations (RL9)	Recommended for Transition to Operations (RL9)	Advanced To Experimental Testing (RL8)	Further Demonstration/ Development (RL 5-7)	Rejected For Further Testing
Evaluation of FPOP Phase 1 WFOs	<b>08/2016</b>				
Evaluation of Ash RGB AAWU		<b>XX</b>			
Evaluation of Client Side RGBs All Offices		<b>XX</b>			
Evaluation of SPoRT RGBs All Offices		<b>XX</b>		<b>XX</b>	
Evaluation of NESDIS Snowfall Rate Products				<b>XX</b>	
Evaluation of ESRL RASM Model ASIP				<b>XX</b>	



# Top FY17 Highlights

## Arctic Testbed and Proving Ground

- **Sea Ice Verification Project (ongoing)**

- Collaborative effort between the ATPG, ASIP, NIC, CIS, and CMC to develop objective and subjective metrics and methods to evaluate sea ice models from an operational perspective

- **MIRS Evaluation**

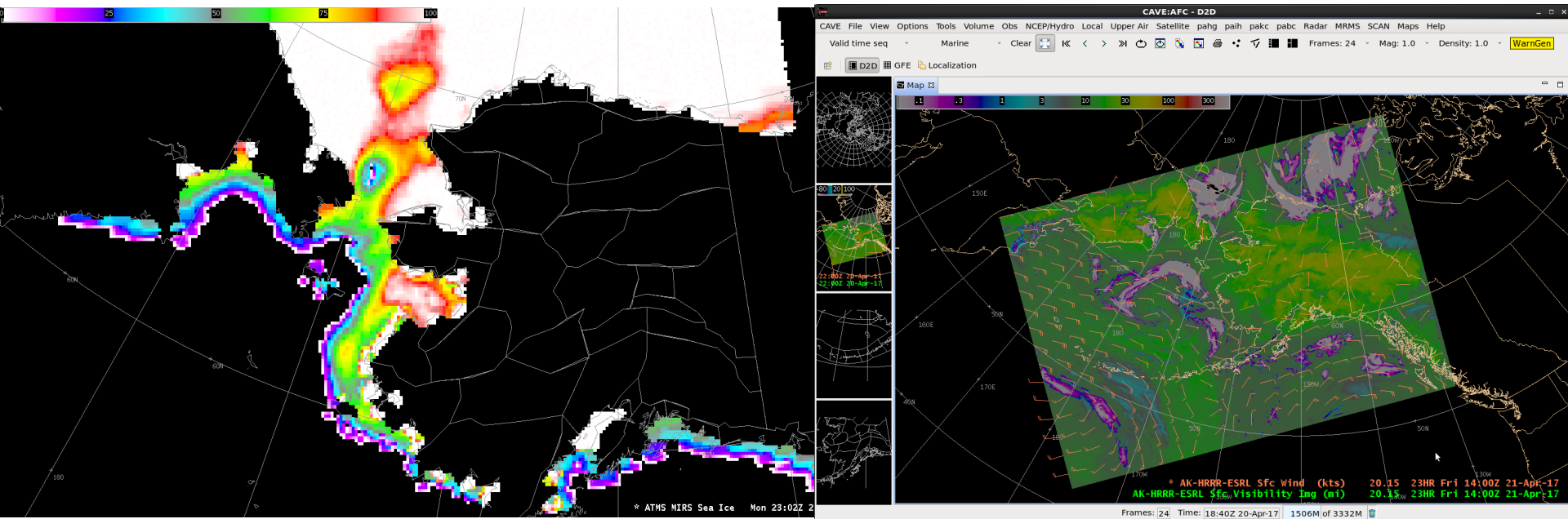
- In collaboration with UAF-GINA/NESDIS, evaluating microwave products from the SNPP/VIIRS platform (April / May 2017)

- **AK-HRRR Evaluation (Ongoing)**

- In collaboration with UAF-GINA/ESRL, evaluation of the AK-HRRR model to help determine NWP improvements at higher latitudes. More intensive evaluation planned Fall/Winter 2017/18



# MIRS Sea Ice & HRRR-Alaska



MIRS sea ice concentration.

White=100%, purples=lower concentrations

HRRR-Alaska from ESRL displayed in AWIPS.

Surface winds and visibility shown.

- Direct readout MIRS microwave sea ice concentration products delivered with 15 minute latency; using microwave instruments: ATMS (on SNPP) and AMSU (MetOp)
- One month evaluation in progress with NWS Alaska Sea Ice Program in Anchorage
- HRRR-Alaska: partnership with NOAA Earth Science Research Lab (a CSTAR project)
- ESRL is doing model runs; NWS Alaska and UAF-GINA supporting validation and providing performance feedback; GINA is also testing assimilation of direct readout data



# Top FY17 Highlights

## Arctic Testbed and Proving Ground

- **AWIPS Aviation Hazards Tool Evaluation (June 2017)**

- In collaboration with the AAWU, AWC, HFO, GSD, and Raytheon. AWIPS based tool to issue aviation hazards (SIGMETs, VAAs, etc)

- **FPOP Phase 2 (ongoing)**

- Continue to improve the WFO gridded forecast process using NBM guidance where possible
- Facilitating NWS Evolve evaluations for Alaska
- Facilitating feedback on AK-URMA/AK-NBM to EMC/MDL
- Facilitating research to improve the AK-URMA





# Top FY17 Highlights

## Arctic Testbed and Proving Ground

- **Evaluation of Ceiling and Visibility Guidance for Alaska (ongoing)**
  - Collaboration with AAWU, EMC, ESRL. Sponsored by AFS-Aviation to improve C&V guidance for Alaska
  - More intensive evaluation (Fall / Winter 2017-18)
- **Evaluation of AK-HRRR WMO PPP – YOPP Potential Activities (Initial Planning)**
  - Continue Virtual Weather Desk – Provide additional observations / model guidance to evaluate potential improvements to forecasts and DSS



# Questions

## Arctic Testbed and Proving Ground

- **Additional Information**

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